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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,998	02/25/2004	Hans-Richard Kretschmer	4001-1166	9771
466 7590 12/21/2007 YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			EXAMINER HYUN, PAUL SANG HWA	
			ART UNIT 1797	PAPER NUMBER
			MAIL DATE 12/21/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/784,998

Applicant(s)

KRETSCHMER, HANS-RICHARD

Examiner

Paul S. Hyun

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-34 is/are pending in the application.
- 4a) Of the above claim(s) 25-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-24, 33 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/2/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

REMARKS

Claims 15-34 are currently pending. In response to the written restriction requirement dated 8/27/07, Applicant elected the prosecution of Invention I, claims 15-24, 33 and 34 with traverse.

Applicant's argument with respect to the restriction requirement has been fully considered, but it is not persuasive. Although claim 15 recites that the claimed holder plate comprises apertures, it is evident from the disclosure of the Specification that the functional sample holder does not actually comprise apertures because a plurality of inserts fill the apertures formed in the holder plate. That said, the claimed sample holder can be formed without forming apertures in the holder plate. For instance, instead of forming apertures in the holder plate followed by filling the apertures with the inserts, the sample holder can be formed by molding the holder plate around the inserts. If the holder plate is molded around the inserts, apertures would not need to be formed in the holder plate. For the foregoing reason, the restriction is maintained.

In summary, claims 15-24, 33 and 34 will be examined on the merits. Claims 25-32 are hereby withdrawn from further consideration as being drawn to non-elected inventions.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims **15, 23, 24 and 33** are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a sample holder comprising inserts that fill apertures provided in the holder plate to define receiving regions and contact locations, does not reasonably provide enablement for a sample holder comprising the receiving regions and the contact locations without the inserts. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

According to the Specification, the exposed surfaces of the inserts define the claimed receiving regions and the contact locations. Without the inserts, the receiving regions and the contact locations fail to exist because the apertures are void and thus cannot support a sample fluid. That said, claim 15 recites the structure of the sample holder absent the inserts. Therefore, the locations of the claimed receiving regions and the contact locations are unclear.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims **16-22 and 34** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites that the receiving regions are mounted on the inserts. It is unclear how a "region" can be mounted onto something. The term "region" does not convey tangibility. Rather, the term conveys a location.

Similarly, claim 17 recites that the contact locations are mounted on the inserts. It is unclear how a "location" can be mounted onto something.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims **15-20, 23 and 33** are rejected under 35 U.S.C. 102(e) as being anticipated by Pisharody et al. (US 6,824,974 B2).

Pisharody et al. disclose a sensor array (see Fig. 4B). The array comprises a plate 16 made from an insulating material (see line 52, col. 10), and inserts in the form of a first electrode 10 and a second electrode 12 spanning the entire thickness of the plate, each electrode comprising an electrically conductive receiving region (top) that is configured to hold nucleotides thereon (see lines 40-50, col. 2). Each electrode also comprises an electrical contact location (bottom) on the other side of plate 16, opposite the conductive receiving region. The receiving region of each electrode can be convexly shaped or textured/corrugated (see lines 50-62, col. 3). The array can further comprise a reference electrode disposed near each electrode pair (see lines 18-23, col. 16).

It should be noted that the limitations "receiving regions" and "electrical contact locations" merely specify locations on the claimed holder plate. The limitations do not positively limit the structure of the claimed holder plate.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims **21, 22, 24 and 34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Pisharody et al.

With respect to claims 21 and 22, Pisharody et al. do not disclose the radius of curvature of the convexly shaped electrode. However, the reference does disclose that the electrodes can be of any desired shape. In light of the disclosure, it would have been obvious to make the radius of curvature of the convexly shaped electrode between 20 and 500 microns to optimize the ability of the electrode to support a sample thereon.

With respect to claim 24, Pisharody et al. do not explicitly disclose that the reference electrode annularly surrounds each receiving region. However, the reference does disclose that the reference electrode can be placed in proximity of the pair of electrodes (see line 20, col. 16). In light of the disclosure, it would have been obvious to one of ordinary skill in the art to provide the reference electrode annularly around each electrode to for easy access.

With respect to claim 34, Pisharody et al. do not disclose that the electrodes have a narrowed mid-region. However, the reference does disclose that the electrodes can be of any desired shape. In addition, the reference discloses that the electrodes can be integrated with the plate (see lines 50-55, col. 3). In light of the disclosure, it would have been obvious to one of ordinary skill in the art to narrow the mid-region of each electrode to secure the electrodes within the plate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul S. Hyun whose telephone number is (571)-272-8559. The examiner can normally be reached on Monday-Friday 8AM-4:30PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/784,998
Art Unit: 1797

Page 7

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PSH
12/19/07


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